

Applications for X-Ray Micro Diffraction

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Micro X-Ray Diffraction (μ XRD) is typically used as a means to extract crystallographic information from small sample amounts or small areas on larger samples. Typically the size that is probed is on the order of 100's of microns or less.

In these experiments, the diffracting volume of the sample is very small, resulting in relatively weak diffracted intensity that is inhomogeneous over diffraction space. 2D X-ray diffraction (XRD²) combines an x-ray source with highest possible intensity with a 2D detector with large active area, high sensitivity, and low background.

In this contribution, we will present new μ XRD application examples, using the latest generation Bruker-AXS X-ray sources and XRD² detectors, from pharmaceuticals, forensics, and other fields of materials research.